

REMARKS

[0001] Applicant respectfully requests reconsideration and allowance of all of the claims of the application. Claims 1-22 and 46-54 are presently pending. Claim amended herein is 1. Claims withdrawn or cancelled herein are 23-45. New claims added herein are 46-54.

Claim Amendments and Additions

[0002] Without conceding the propriety of the rejections herein and in the interest of expediting prosecution, Applicant amends claim 1 herein. Applicant amends claims to clarify claimed features. Such amendments are made to expedite prosecution and more quickly identify allowable subject matter. Such amendments are merely intended to clarify the claimed features, and should not be construed as further limiting the claimed invention in response to the cited references.

[0003] Claim 1 is amended to overcome § 101 rejections. Support for the amendment to claim 1 is found in the specification at least at page 25 line 21.

[0004] Furthermore, Applicant adds new claims 46-54 herein. These new claims are fully supported by Application and therefore do not constitute new matter. Support for new claims 46-54 can be found in the specification at least at p. 2 lines 19-22, p. 3 line 1, p. 8 lines 12-13, p. 9 lines 1-4, p. 12 lines 18-20, p. 13 line 14 and p. 14 line 3. New claims 46-54 are asserted allowable over the cited references for at least the same reasons that claims 1, 9, and 17 are allowable over the cited references.

Substantive Matters

Claim Rejections under § 101

[0005] Claims 1-8 and 17-22 are rejected under 35 U.S.C. § 101. Applicant respectfully traverses this rejection. Furthermore, in light of the amendments presented herein, Applicant respectfully submits that these claims comply with the patentability requirements of §101 and that the §101 rejections should be withdrawn. Applicant further asserts that these claims are allowable. Accordingly, Applicant asks the Examiner to withdraw these rejections.

[0006] If the Examiner maintains the rejection of these claims, then Applicant requests additional guidance as to what is necessary to overcome the rejection.

Claim Rejections under § 102 an § 103

[0007] The Examiner rejects claims 1-22 under § 102. For the reasons set forth below, the Examiner has not shown that the cited references anticipate the rejected claims.

[0008] In addition, the Examiner rejects claims 1-22 under § 103. For the reasons set forth below, the Examiner has not made a prima facie case showing that the rejected claims are obvious.

[0009] Accordingly, Applicant respectfully requests that the § 102 and § 103 rejections be withdrawn and the case be passed along to issuance.

[0010] The Examiner's rejections are based upon the following references alone and in combination:

- **Kirovski:** *Kirovski, et al.*, US Patent Application No. 2002/0107691 (published August 8, 2002);
- **Felten:** *Felten, et al.*, "Reading Between the Lines: Lessons from the SDMI Challenge" USENIX, August 13-17, 2001; and
- **Cox:** *Cox, et al.*, "Some general methods for tampering with watermarks" IEEE, 1998, pages 1-15.

Overview of the Application

The Application describe a technology facilitating circumvention of dynamic and robust detection of one or more embedded-signals (e.g., watermark, copyright notice, encoded data, etc.) in one or more input carrier signals (e.g., multimedia stream, video stream, audio stream, data, radio, etc.).

Cited References

[0011] The Examiner cites Kirovski as the primary reference in the anticipation-based rejections. The Examiner cites Felten and Cox as secondary references in the obviousness-based rejections.

Kirovski

[0012] Kirovski describes a technology for detecting watermarks in audio signals, such as a music clip. The watermark identifies the content producer,

providing a signature that is embedded in the audio signal and cannot be removed.

Felten

[0013] Felten describes a technology challenge issued by the Secure Digital Music Initiative (SDMI) to analyze the strength of four watermarking technologies, and two other security technologies. The challenge described a specific goal, such as to render undetectable a watermark from an audio track, and offered a web-based oracle that would confirm whether the challenge was successfully defeated.

Cox

[0014] Cox summarizes a series of attacks that are all independent of the underlying algorithm used for watermarking. There are also numerous other attacks that can be made to specific classes of algorithms. For example, in many watermarking schemes for video and images, a registration pattern is embedded in the image to provide tolerance to geometric distortions. If correct registration can be prevented, then watermark detection will fail. Also described is a sensitivity attack that shows that if a watermark detection algorithm could be placed in a perfectly tamperproof box, this does not necessarily imply that the attacker cannot find a method to remove the watermark.

Anticipation Rejections

[0015] Applicant submits that the anticipation rejections are not valid because, for each rejected claim, no single reference discloses each and every element of that rejected claim.¹ Furthermore, the elements disclosed in the single reference are not arranged in the manner recited by each rejected claim.¹

Based upon Kirovski

[0016] The Examiner rejects claims 1-22 under 35 U.S.C. § 102(b) as being anticipated by Kirovski. Applicant respectfully traverses the rejection of these claims. Based on the reasons given below, Applicant asks the Examiner to withdraw the rejection of these claims.

Independent Claim 1

[0017] Applicant submits that Kirovski does not anticipate this claim because it does not disclose at least the following features as recited in this claim (with emphasis added):

- **determining where a dynamic embedded-signal detection program module ("detector") receives a subject input stream for**

¹ "A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987); also see MPEP §2131.

the detector to perform detection thereon to determine if the stream has an embedded-signal therein;

- **interfering with clear reception** of the subject input stream, thereby hindering detection by the detector.

[0018] The Examiner indicates (Action, p. 3) the following with regard to this claim:

Kirovski teaches a processor-readable medium having processor-executable instructions that, when executed by a processor, performs a method comprising: determining where a dynamic embedded-signal detection program module ("detector") receives a subject input stream for the detector to perform detection thereon to determine if the stream has an embedded-signal therein; (page 1, pp. 56-60; page 53, pp. 153-154) interfering with clear reception of the subject input stream, thereby hindering detection by the detector. (page 1, pp. 56-60; page 53, pp. 153-154)

As per claims 2, 10 and 18:

[0019] In this Action, the Examiner equates the "detecting watermarks in audio signals" disclosed by Kirovski (abstract), with the "determining where a dynamic embedded-signal detection program module ("detector") receives a subject input stream". Kirovski is directed towards the signal whereas the claim is directed to where the signal is received, in order to "interfere with the clear reception of the input stream".

¹ See *In re Bond*, 910 F.2d 831, 15 USPQ2d 1566 (Fed. Cir. 1990).

[0020] Consequently, Kirovski does not disclose all of the elements and features of this claim. Accordingly, Applicant asks the Examiner to withdraw the rejection of this claim.

Dependent Claims 2-8

[0021] These claims ultimately depend upon independent claim 1. As discussed above, claim 1 is allowable. It is axiomatic that any dependent claim which depends from an allowable base claim is also allowable. Additionally, some or all of these claims may also be allowable for additional independent reasons.

Independent Claim 9

[0022] Applicant submits that Kirovski does not anticipate this claim because it does not disclose at least the following features as recited in this claim (with emphasis added):

- **determining where a dynamic embedded-signal detection program module ("detector") receives a subject input stream for the detector to perform detection** thereon to determine if the stream has an embedded-signal therein;
- **interfering with clear reception** of the subject input stream, thereby hindering detection by the detector.

[0023] The Examiner rejects claim 9 for the same reasons as the Examiner rejects claim 1.

[0024] In this Action, the Examiner equates the “detecting watermarks in audio signals” disclosed by Kirovski (abstract), with the “determining where a dynamic embedded-signal detection program module (“detector”) receives a subject input stream”. Kirovski is directed towards the signal whereas the claim is directed to where the signal is received, in order to “interfere with the clear reception of the input stream”.

[0025] Consequently, Kirovski does not disclose all of the elements and features of this claim. Accordingly, Applicant asks the Examiner to withdraw the rejection of this claim.

Dependent Claims 10-16

[0026] These claims ultimately depend upon independent claim 9. As discussed above, claim 9 is allowable. It is axiomatic that any dependent claim which depends from an allowable base claim is also allowable. Additionally, some or all of these claims may also be allowable for additional independent reasons.

Independent Claim 17

[0027] Applicant submits that Kirovski does not anticipate this claim because it does not disclose at least the following features as recited in this claim (with emphasis added):

- a memory-location determiner configured to **determine where a dynamic embedded-signal detection program module ("detector") receives a subject input stream** for the detector to perform detection thereon to determine if the stream has an embedded-signal therein;
- **an interferer configured to interfere with clear reception** of the subject input stream, thereby hindering detection by the detector.

[0028] The Examiner rejects claim 17 for the same reasons as the Examiner rejects claim 1.

[0029] In this Action, the Examiner equates the "detecting watermarks in audio signals" disclosed by Kirovski (abstract), with the "determine where a dynamic embedded-signal detection program module ("detector") receives a subject input stream". Kirovski is directed towards the signal whereas the claim is directed to where the signal is received, in order to "interfere with clear reception of the input stream".

[0030] Consequently, Kirovski does not disclose all of the elements and features of this claim. Accordingly, Applicant asks the Examiner to withdraw the rejection of this claim.

Dependent Claims 18-22

[0031] These claims ultimately depend upon independent claim 17. As discussed above, claim 17 is allowable. It is axiomatic that any dependent claim which depends from an allowable base claim is also allowable. Additionally, some or all of these claims may also be allowable for additional independent reasons.

Obviousness Rejections

Lack of *Prima Facie* Case of Obviousness (MPEP § 2142)

[0032] Applicant disagrees with the Examiner's obviousness rejections. Arguments presented herein point to various aspects of the record to demonstrate that all of the criteria set forth for making a prima facie case have not been met.

Based upon Felten and Cox

[0033] The Examiner rejects claims 1-22 under 35 U.S.C. § 103(a) as being unpatentable over Felten in view of Cox . Applicant respectfully traverses the rejection of these claims and asks the Examiner to withdraw the rejection of these claims.

Independent Claim 1

[0034] Applicant submits that the combination of Felten and Cox does not teach or suggest at least the following elements as recited in this claim (with emphasis added):

- **determining where a dynamic embedded-signal detection program module ("detector") receives a subject input stream** for the detector to perform detection thereon to determine if the stream has an embedded-signal therein;

- **interfering with clear reception** of the subject input stream, thereby hindering detection by the detector.

[0035] The Examiner indicates (Action, p. 5) the following with regard to this claim:

Felten teaches a processor-readable medium having processor-executable instructions that, when executed by a processor, performs a method comprising: determining where a dynamic embedded-signal detection program module ("detector") receives a subject input stream for the detector to perform detection thereon to determine if the stream has an embedded-signal therein; (Abstract; 1. Introduction; 3.1 Attack and Analysis of Technology A; 5. conclusion) In addition, Felten discloses refining attacks to introduce distortions. Felten fails to explicitly disclose interfering with clear reception of the subject input stream, thereby hindering detection by the detector. Cox in analogous art, however, teaches interfering with clear reception of the subject input stream, thereby hindering detection by the detector. (5. Signal Transformation) Therefore, it would have been obvious to one ordinary skill in the art at the time the invention was made to modify the system disclosed by Felten with Cox in order to examine to what extent a watermark can be resistant to tampering to a variety of possible attacks. (Cox Abstract)

[0036] In this Action, the Examiner admits that "Felton fails to explicitly disclose the interfering with clear reception of the subject input stream". The Examiner goes on to cite the Signal Transformation of Cox as "interfering with the clear reception of the subject input stream, thereby hindering detection by

the detector.” The signal itself is being transformed by Cox. This is not the same as the interfering with the reception of the signal, as recited by the claim.

[0037] Therefore, as shown above, the combination of Felten and Cox does not teach or suggest all of the elements and features of this claim. Accordingly, Applicant asks the Examiner to withdraw the rejection of this claim.

Dependent Claims 2-8

[0038] These claims ultimately depend upon independent claim 1. As discussed above, claim 1 is allowable. It is axiomatic that any dependent claim which depends from an allowable base claim is also allowable. Additionally, some or all of these claims may also be allowable for additional independent reasons.

Independent Claim 9

[0039] Applicant submits that the combination of Felten and Cox does not teach or suggest at least the following elements as recited in this claim (with emphasis added):

- **determining where a dynamic embedded-signal detection program module (“detector”) receives a subject input stream for the detector to perform detection** thereon to determine if the stream has an embedded-signal therein;

- **interfering with clear reception** of the subject input stream, thereby hindering detection by the detector.

[0040] The Examiner rejects claim 9 for the same reasons as the Examiner rejects claim 1.

[0041] In this Action, the Examiner admits that "Felton fails to explicitly disclose the interfering with clear reception of the subject input stream". The Examiner goes on to cite the Signal Transformation of Cox as "interfering with the clear reception of the subject input stream, thereby hindering detection by the detector." The signal itself is being transformed by Cox. This is not the same as the interfering with the reception of the signal, as recited by the claim.

[0042] Therefore, as shown above, the combination of Felten and Cox does not teach or suggest all of the elements and features of this claim. Accordingly, Applicant asks the Examiner to withdraw the rejection of this claim.

Dependent Claims 10-16

[0043] These claims ultimately depend upon independent claim 9. As discussed above, claim 9 is allowable. It is axiomatic that any dependent claim which depends from an allowable base claim is also allowable. Additionally, some or all of these claims may also be allowable for additional independent reasons.

Independent Claim 17

[0044] Applicant submits that the combination of Felten and Cox does not teach or suggest at least the following elements as recited in this claim (with emphasis added):

- a memory-location determiner configured to **determine where a dynamic embedded-signal detection program module ("detector") receives a subject input stream** for the detector to perform detection thereon to determine if the stream has an embedded-signal therein;
- **an interferer configured to interfere with clear reception** of the subject input stream, thereby hindering detection by the detector.

[0045] The Examiner rejects claim 17 for the same reasons as the Examiner rejects claim 1.

[0046] In this Action, the Examiner admits that "Felton fails to explicitly disclose the interfering with clear reception of the subject input stream". The Examiner goes on to cite the Signal Transformation of Cox as "interfering with the clear reception of the subject input stream, thereby hindering detection by the detector." The signal itself is being transformed by Cox. This is not the same as the interfering with the reception of the signal, as recited by the claim.

[0047] Therefore, as shown above, the combination of Felten and Cox does not teach or suggest all of the elements and features of this claim. Accordingly, Applicant asks the Examiner to withdraw the rejection of this claim.

Dependent Claims 18-22

[0048] These claims ultimately depend upon independent claim 17. As discussed above, claim 17 is allowable. It is axiomatic that any dependent claim which depends from an allowable base claim is also allowable. Additionally, some or all of these claims may also be allowable for additional independent reasons.

Dependent Claims

[0049] In addition to its own merits, each dependent claim is allowable for the same reasons that its base claim is allowable. Applicant requests that the Examiner withdraw the rejection of each dependent claim where its base claim is allowable.

Conclusion

[0050] All pending claims are in condition for allowance. Applicant respectfully requests reconsideration and prompt issuance of the application. If any issues remain that prevent issuance of this application, the **Examiner is urged to contact me before issuing a subsequent Action.** Please call or email me at your convenience.

Respectfully Submitted,

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